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CAPITAL IMPROVEMENT NEEDS

LANDIS, NORTH CAROLINA

CAPITAL IMPROVEMENT NEEDS, LANDIS, NORTH CAROLINA

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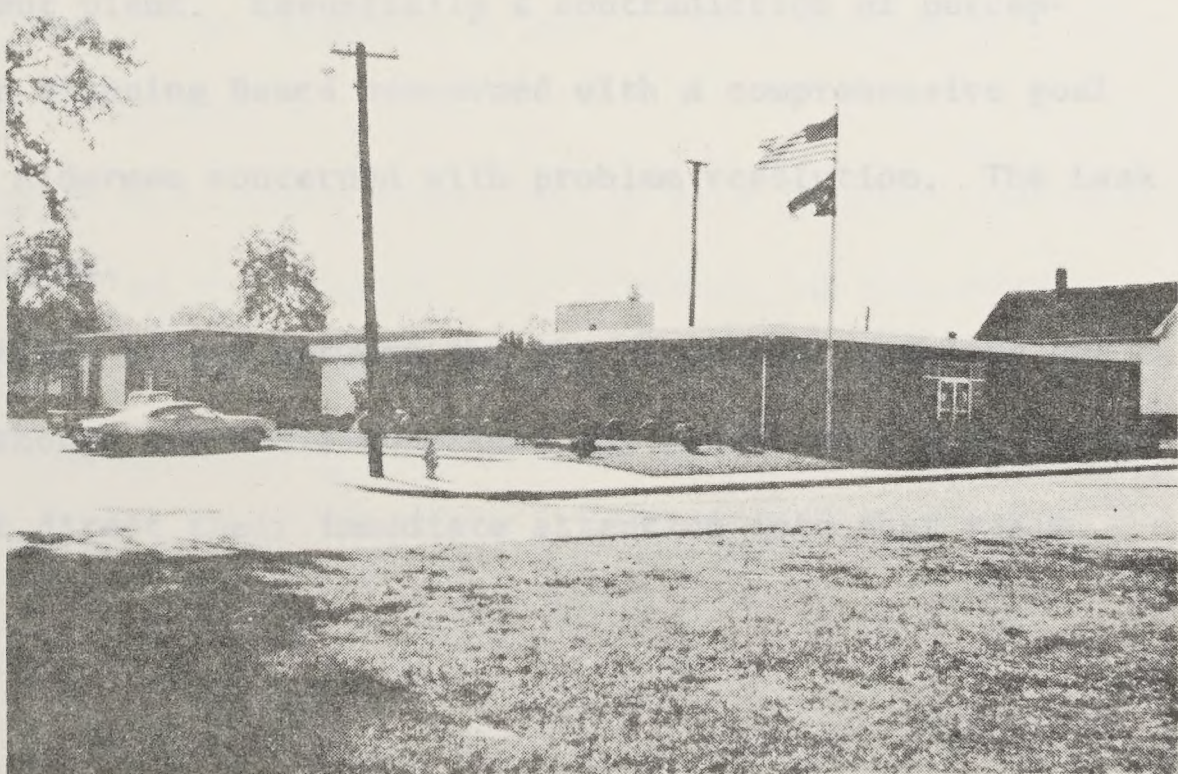
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TABLE OF CONTENTS

	<u>Page</u>
Introduction	1
Sources of Revenue	5
Administrative Services.	10
Electrical System.	14
Water Supply and Delivery.	18
Wastewater Collection and Disposal	21
Street Maintenance	26
Police Protection.	29
Recreation Facilities.	31
Appendix	
Proposed Development Policy.	33
Capital Budget	39



LANDIS CAPITAL IMPROVEMENT NEEDS

INTRODUCTION

The Town of Landis has been involved in the capital budgeting process for several years. Two community facilities studies and several public improvements programs and capital budgets have been carefully prepared utilizing the best available data, input from department heads and elected officials, careful projections of revenues and expenditures and selection of a variety of capital investment and development programs in response to perceived needs. The efficacy of this process has produced, at best, less than optimum results.

In an attempt to identify the shortcomings of the capital budgeting process, town officials were asked why the capital budget was not utilized more effectively. The most prevalent response could be stated as "the capital budget-public improvements documents have been analytical and comprehensive projections of a variety of major capital needs while elected officials are looking at a few select areas of pressing concern that require constant attention." In other words, while the Planning Board is contemplating the comprehensive nature of the planning process, the Board of Aldermen (elected officials) might be concerned with major failures at the waste water treatment plant. Essentially a contradiction of perception exists between the Planning Board concerned with a comprehensive goal state and the Board of Aldermen concerned with problem resolution. The task is to address both concerns.

The principal conflict arises between the gap of current problems and the goal state. Even though the decision makers may concur with a projected goal state, they cannot direct their immediate attention into that realm.

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The perception of a problem not only determines the kinds of solutions but also the strategies used in its solution.

The decisions of the Board of Aldermen have broad and long range affects on the quality of the urban environment on the community of Landis. Failure to produce the right decisions (i.e., investments) has strong and damaging affects on the quality of that environment. Dr. Laurence Peter in The Peter Plan dedicates that book

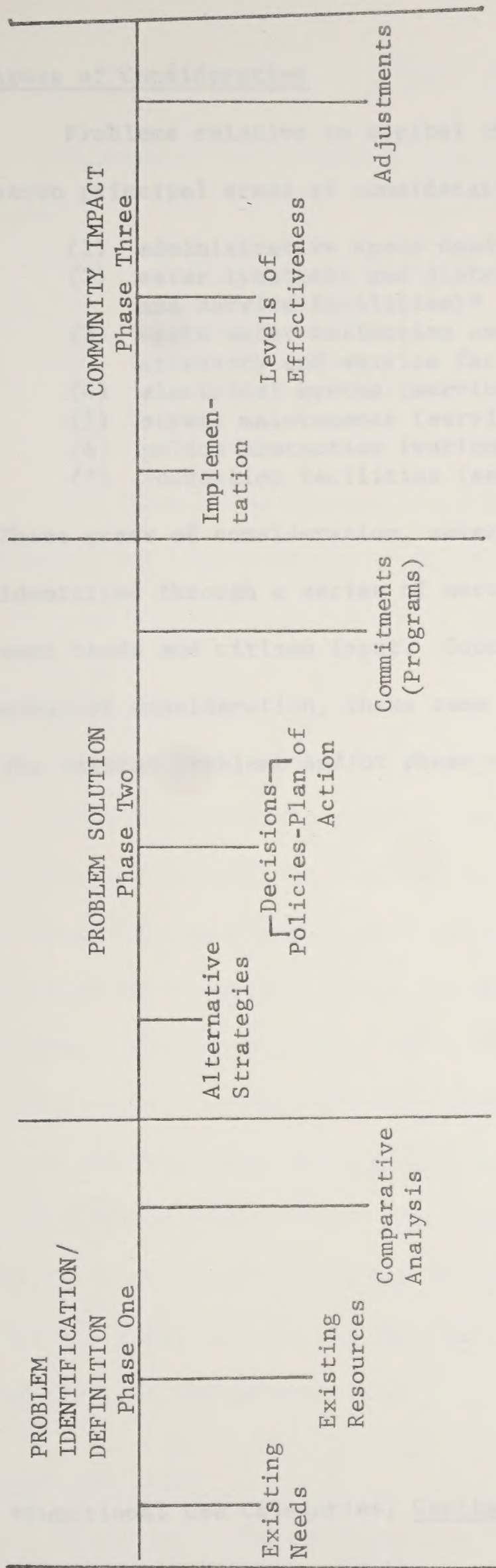
"To all those, while trying to be part of the solution, recognize they are still part of the problem."

This report attempts to identify the perceivers and problems inclusive of their solutions and strategies.

Methodology

The basic assumption of this report is that problems relating to the inadequacy or non-existence of key capital facilities and improvements can be solved through a process of problem identification/definition including a review of existing conditions and resources; strategy of solution including decisions and commitments by the Board of Aldermen; and projection of community impact including levels of effectiveness. The third part of the process will connect this report into an annual reassessment of capital improvement needs relative to the budgeting process. This process is graphically illustrated on Exhibit I.

Not all capital improvement needs identified in this document necessarily fall within the first phase of the process. For example, the acquisition of Rozelle Lighting Company, to be discussed later, is within phase three of this process and is currently being measured for levels of effectiveness.



Areas of Consideration

Problems relative to capital improvement needs can be categorized into seven principal areas of consideration:

- (1) administrative space needs (structural)*
- (2) water treatment and distribution (structural accessory and service facilities)*
- (3) waste water collection and treatment (structural accessory and service facilities)*
- (4) electrical system (service facilities)*
- (5) street maintenance (service facilities and maintenance)*
- (6) police protection (vehicular)*
- (7) recreation facilities (service facilities)*

These areas of consideration, several of which are overlapping, were identified through a series of meetings involving elected officials, department heads and citizen input. Concurrent with the identification of the areas of consideration, these same groups have been identifying and defining the related problems and/or phase of process development.

*Functional Use Categories, Capital Improvements Budget, 1976-77 to 1981-82

SOURCES OF REVENUE

Generally, the following constitute the sources of revenue for the town:

- (1) local property taxes - 55¢ per \$100 assessed valuation
- (2) water and sewer revenues: rates, tap-ons, assessments
- (3) electrical revenues
- (4) Powell Bill funds
- (5) General Revenue Sharing
- (6) bonds
- (7) other state and Federal grants

The first three sources are essentially the only areas over which the town has any real ability to control. Even these have their economic and political limits.

Local Property Taxes

Traditionally there is tremendous resistance to property tax rate increases from both the property owner and the governing body. The logical solution to raising the level of revenue generated from property taxes is to expand the base rather than the rate of taxes. The key element to this solution is to expend less on the expansion than is being generated in revenue. Thus annexations, if evaluated only on assessed valuations, should occur only in areas that will generate more revenue from property taxes than the costs of supplying municipal services. However, this is a rather narrow prospective. The first priority of an annexation program should be to annex those areas which require urban services. Fiscal responsibility requires that the town balance benefits and costs of annexation to the town and the annexed area.

Water and Sewer

Water and sewer revenues from usage charges (rates) are also generally difficult to raise. However, unlike police and fire protection, water is

a continuously consumed commodity. The revenues from water usage should not only pay the cost of production but also contribute to the overall fiscal operation of the town. To a great extent the ability to produce sufficient revenues from water usage limits the need to increase property taxes. Also similar to property taxes expansion of the base to more customers produces added revenues if the expansion does not incur more costs than potential revenues. Essentially the "economy of scale" is a guiding economic principal. If a given system can produce a maximum number of gallons and is utilized less than the maximum, then expansion of the number of customers should be considered. If an expansion of the base would result in usage over the system's maximum production capacity, then an expansion of the system would be required and must produce as much or more than the costs incurred.

Electrical Revenues

Landis is unique in Rowan County as an "electric city." Purchasing power from Duke Power and distributing power to its citizens, Landis has the ability to serve its citizens electricity at lower rates than available elsewhere in Rowan County and at the same time produce revenues for the total town operation. Unlike the two previous sources of revenue, the ability to expand the base is limited legislatively by the State of North Carolina. Service or franchise boundaries are delineated by the N. C. Utilities Commission and one system may not encroach on the area of another system.

In March of 1977 the Town of Landis, after passage of a bond referendum by the citizens and approval of the N. C. Local Government Commission and Utilities Commission, acquired a small private electrical company which served part of town. This action provided the only real system expansion capability available to the town.

With the noted exception, the only feasible way to increase revenues from the electrical system is to increase rates. To a great extent this is done as a result of increases in the cost of wholesale power purchased from Duke Power. Therefore, the town must adjust rates in order to assure a proper return as a result of increased costs.

Powell Bill

The Powell Bill Fund is a restricted funding source allocated to local governments by the state for highway improvements. Therefore, Powell Bill funds are of little impact on the overall capital improvement needs except that they limit the amount of revenues diverted to street and road improvements.

General Revenue Sharing

General Revenue Sharing funds allocated to the town are general in purpose. Even though this program has recently been extended, it remains unwise to use these funds for operational expenses. Therefore, they should be utilized as a primary source of a revenue to a capital reserve account for future funding of capital improvements. Care must be taken to use General Revenue Sharing along with other capital reserve funds in a manner that produces the most for reaching results.

Bonds

Even though municipal bonds are a source of revenue for the town, there are a number of important limitations which include:

- (1) statutory debt limitations
- (2) the bond market (sale and interest)
- (3) tax payer resistance to additional bond referendum
(i.e., General Obligation Bonds)
- (4) common sense

The final reason is perhaps the most important. No municipality or individual knowingly wants to extend beyond prudent limits its indebtedness. As a result of the failure of a number of local governments during the 1930's, fiscal prudence has been legislatively mandated and controlled through the N. C. Local Government Commission. But even with statutory limitations a municipality is wise to hold down its debt service to a bare minimum. However, this is not to say that a municipality should not use its bonding authority. Certain major capital improvements which are necessary to the continued well-being of the municipality may have to be funded through the sale of bonds. Being "penny wise and pound foolish" has a critical meaning when a town must make improvements to its facilities in order to maintain an acceptable level of service or expand its system benefiting the entire community.

Intergovernmental Revenue

These are funds collected by the State of North Carolina and distributed to local governments. The two major sources are local government sales tax and ABC net revenues. The second category (ABC net revenues) is collected by the state from funds derived out of the ABC system and a portion thereof distributed to local governments.

Local government sales tax is the one cent portion of the four cents sales tax collected by North Carolina. The level of this funding is directly related to the amount of sales within the municipality. Therefore this source of revenue is the most rapidly affected by a slow down or upturn in economic conditions.

The expansion of the commercial base of a community would result in an increase in sales tax revenue shared by the state and the town.

State and Federal Programs

There is a wide array of federal and some state programs which provide funding for capital improvements. Yet, small municipalities have been "locked out" of a number of major capital funding programs. Such programs as Community Development Block Grants and the Public Works Capital Development and Investment programs are virtually eliminated as funding sources. The major sewer facilities program (201 facilities program) is dependent upon a maze of plan preparations and reviews. For a town such as Landis an approved "201" plan and its recommended improvements alternative, even with a 75 percent federal contribution, will require a local share of over \$700,000. These types of capital improvements are increasingly burdening the fiscal ability of a small town to function.

ADMINISTRATIVE SERVICES
(MUNICIPAL BUILDING-LIBRARY)

Phase One: Problem Identification/Definition

The Landis municipal building was constructed in 1963 with an addition for a warehouse/storage area in 1967. The structure contains a total area of 7,887 square feet and houses the mayor's office, town clerk's office, public works office, police station, fire station, conference room, municipal library and affiliated storage. The greatest problem is perceived as inadequate space for Aldermen chambers and public meeting area. An addition to this problem is the fact there is little room for expansion of either staff or equipment.

A recent study of library needs recommended consolidation of a branch library for the China Grove-Landis area. Such consolidation would require a larger facility than currently available in either community.

Need. The need is identified as the expansion of Aldermen chambers and administrative area to meet current space needs and permit a degree of expansion for the future. A second need is perceived as providing an adequate library facility for the Town of Landis.

Resources. Resources include a generally adequate municipal building that is both modern and structurally sound. The 1975 Community Facilities Study identified the potential for a second floor addition.

Comparative Analysis. There are several limitations for expansions of the structure and alterations within the facility. These include limited land area owned by the town for possible additions and the existence of load bearing walls within the facility. The need for some form of expansion has been identified and possible resources for such expansion identified in phase two.

Phase Two: Problem Solution

Alternative Strategies. A number of possible solutions for fulfilling the needs at various levels are herein identified. These needs are broken into two general areas.

(A) Municipal Building Expansion. For the provision of increased meeting room area and administrative services.

(1) Relocate the Board of Adlermen's chambers to the existing library, provide for the necessary furniture and appurtenances for a public meeting area, and alter the librarian's office for use by the mayor. This alternative would permit the use of the existing conference room for administration and conference area to be utilized by the clerk and for smaller meetings. The existing clerk/mayor's office could be utilized for file maintenance and accounting.

(2) Remove the wall separating customer services and the clerk/mayor's office permitting more room for administrative services. This alternative, while providing a larger work area, would eliminate the quarters of the administrative officer and mayor. This alternative might also involve the removal of a load bearing wall requiring reinforcement to insure the structural integrity of the building.

(3) Additions to the building to include adjacent expansion and second floor expansion. This alternative poses a long term solution to expansion needs as a result of increased staff and services. Both possibilities of this alternative are comparatively expensive. The first is limited by the lack of land under town ownership. The second possibility would involve an analysis of the structure's ability to support a second floor. This possibility could also incur a major disruption of town services over a period of time.

(4) Construct a new municipal building in accordance with long term needs. Of course this alternative would be the most expensive. It would require the elimination of a relatively new facility. Few sites are available for such a new facility that would meet accessibility requirements.

(5) A combination of any of the above strategies.

(6) Do nothing and continue to operate in the present facility.

(B) Library Services and Facilities serving the population of Landis are perceived as a major need of the municipality.

(1) Locate a new library facility in any possible expansion of the municipal building.

(2) Include a library facility in a new municipal building.

(3) Provide a new location for the library facility in:

(a) an existing structure accessible to the population (i.e., vacant downtown structure). This possibility would require some form of structural alteration.

(b) construct a new structure to house library services

(c) locate a library facility in combination with a school-library complex.

(4) Consolidate a library facility serving Landis and China Grove in a new or existing structure accessible to both towns.

(5) A combination of the above strategies.

(6) Do nothing and maintain library services in the current facility.

Any change in status or location of a library services facility is directly linked with decisions relative to the municipal building. A decision on expansion or improvements to the municipal building should consider affects on library services.

Decisions. In view of the potential growth of the Town of Landis and the expansion of town services (i.e, electrical system expansion), the need for improvements to the administrative facilities should receive considerable attention. The Board of Aldermen has not made a definite decision as to possible courses of action. However, a space needs study has been identified as a planning element for the 1977-78 work program.

Commitments. A commitment to develop a space needs study is the first step in projecting the needs and alternatives in this document in relation to long term capital improvements recommendations proposed in a space needs study.

Phase Three: Community Impact

Essentially the examination of the current facility that was constructed in 1963 constitutes entry into phase three of the program. The municipal building and library have been identified as capital improvements which were implemented some fourteen years ago. Levels of effectiveness and adjustments are being examined within this document and the subsequent space needs study.

ELECTRICAL SYSTEM

Phase One: Problem Identification/Definition

During the last several years there has been discussion about the possibility of acquiring Rozelle Light Company, a private electrical power supplier serving an estimated 988 customers in and around the Town of Landis. The town has been an "electric city" for several years so when negotiations were requested between Rozelle and the town during 1976, the possibility of enlarging the municipal system was pursued. Subsequently the citizens of Landis approved the sale of \$700,000 in general obligation bonds. With the approval of the N. C. Local Government Commission the bonds were sold and Rozelle Lighting was added to the municipal system with the approval of the N. C. Utilities Commission.

Need. The need as perceived by the Town of Landis was to expand its municipal electrical system to all residents of the town and the major industrial activities. With a private company ready to withdraw from operations, the possibilities included acquisition by Duke Power (the area's largest franchised electrical utility), acquisition by another company, or acquisition by the town.

Resources. In a feasibility study prepared by the consulting firm (Southeastern Engineering) resources identified included:

(1) The ability to simply assume operations of Rozelle considering the interlink of the distribution systems (Landis sold power directly to Rozelle).

(2) Adequate personnel and facilities to absorb the private system into the municipal one (two employees of Rozelle were immediately available to the town).

(3) The town's excellent bond rating.

(4) An estimated minimum potential return of \$28,000 per annum after operations, principal and interests costs.

(5) The perceived willingness of the voters to approve a bond referendum.

(6) Estimated reductions in electric utility costs to town residents served by Rozelle.

These resources combined to make acquisition of Rozelle Lighting a potentially sound investment.

Comparative Analysis. The perceived need of expanding the municipal system to all town citizens and the enumerated resources were strong determinants in continued negotiations with Rozelle and the setting of a bond proposal to the citizens.

Phase Two: Problem Solution

Alternative Strategies. Basically only two possibilities were open to the town: (1) Pursue acquisition of Rozelle Lighting through negotiations for purchase price and a vote of public approval for bond sales and (2) Do nothing and permit possible acquisition by another company. These alternative strategies were basically clear and distinct with little or no overlapping possibilities.

Decisions. The decision whether or not to acquire the private system came from the Board of Aldermen after two preliminary decisions: (1) To negotiate with Rozelle Lighting for possible purchase and (2) To authorize a feasibility study by a competent electrical engineering firm. The results of these two decisions convinced the Board of Aldermen as to the soundness of the expansion.

Commitments. The basic commitment of the Town of Landis was to proceed with placing a bond issue for acquisition to the people of Landis.

This commitment was also a proposal commitment by the citizens of Landis to "place the full faith and credit" of the municipality behind the acquisition. Subsequently the bond issue passed. With final approval of the N. C. Local Government Commission and the N. C. Utilities Commission the Town of Landis proceeded with purchase, and consolidation of the two systems was accomplished in March, 1977.

Phase Three: Community Impact

Implementation. The fulfillment of the capital need is currently in this stage of phase three. The Town of Landis is now serving the entire community through the joint capital facilities and equipment. At least two of the former employees of Rozelle are now employed by the town.

Levels of Effectiveness. Measuring the levels of effectiveness will have to be accomplished by measuring the results of the acquisition against the intended results of the town. In seeking acquisition the town was anticipating:

- (1) An expanded system serving the entire town thus extending the benefits of lower electrical utility costs to all its citizens.
- (2) Providing a larger base of operation incurring less administrative and operational costs per customer.
- (3) Increasing revenues from electrical utilities and thus contributing more to the overall operations and services of the municipality.
- (4) The ability to serve major industrial customers.
- (5) Broadening the service base where new growth areas not within the franchise area of Duke Power could be served by the town.

The effectiveness of this major capital acquisition should be measured against these anticipations.

Adjustments. Adjustments in this capital development program may be required to insure the effectiveness of the program. Such adjustments could include:

- (1) Continuous capital development program for electrical distribution to insure that the system is operating at acceptable levels for service and safety.
- (2) A periodic analysis of the rate structure to insure that the system is generating the necessary revenues to contribute to a high level of services and facilities for the Town of Landis.
- (3) Awareness of expanding the system, where permitted by the N. C. Utilities Commission, to developing areas.

WATER SUPPLY AND DELIVERY

Phase One: Problem Identification/Definition

The Town of Landis is fortunate in having developed a treated water capacity to match its long term needs. Through impoundment sites at Lake Corriher and Lake Wright the town has a raw water capacity of 2.3 million gallons per day. The Town of Landis also has a treatment capacity of stored water at two million gallons per day and is currently utilizing less than fifty percent of this capacity. This is an admirable situation in comparison to neighboring municipalities who are reaching their water production capacity. However, the town needs to insure that the tremendous capital investment in water supply and treatment generates an adequate return in revenues.

Problem identification/definition is perceived as focusing on a large underutilized capacity of treated and stored water with inadequate returns on the investment.

Need. The need is to insure that a greater level of treated water capacity is consumed and generates revenues sufficient to justify the investment in the capital investment and development program of water supply.

Resources. Resources include the two million gallons per day capacity of the treated water storage system, existing and potential growth in the urban fringe, an adjacent municipality in need of a supplemental water supply (China Grove), and the willingness of Rowan County to participate in the cost of connecting the two municipal systems.

Comparative Analysis. Basically the need to sell a portion of the excess capacity can be matched with the need for supply in both the developing and developed unincorporated urban areas and the needs of the adjacent municipality. Both the urban fringe and the adjacent municipality serve as resources through which the need to sell excess capacity could be fulfilled.

Phase Two: Problem Solution

Alternative Strategies. Several possible strategies could be utilized to fulfill the need at varying levels. These include:

- (1) Expansion of the distribution system to projected growth areas with sufficient line size to serve projected types and intensity of development at town expense. This strategy would have to be combined with the extension of sewer facilities. Together the water and sewer system would serve to encourage development utilizing portions of the excess capacity. This strategy would have to be carefully developed in light of costs of extensions and improvements and the ability of the town to recoup investments through increased revenues from utility charges, tap-ons and assessment fees and property taxes if annexation occurred.
- (2) Extending the town system in response to the demands of individual developing areas at town expense.
- (3) Extending the town system in response to the demands of individual developing areas at developer/property owner's expense and providing a financial mechanism for the developer to recoup his investment.
- (4) Adoption of a comprehensive development policy (see appendix) in coordination with the Land Development Plan providing for the extension of water and sewer lines to developing urban areas and developed areas. This policy would be coordinated with the annexation program and proposed subdivision regulations providing minimum standards for community facilities in new urban areas. The policy would also provide the mechanism for the extension of facilities for existing urban areas and prorate the expense for community facilities relative to long term revenue return.

(5) Extension of water main to the Town of China Grove with a maximum consumption rate. This extension would include a usage rate adequate to provide sufficient return on investments in capital facilities and also generate added revenue for the town's overall budget. Rowan County has indicated its willingness to participate up to one-third the cost of line installation if both municipalities would extend fire protection to the intervening unincorporated urban area.

(6) None of the above and continue the system as currently operated. Any one or combination of the above alternative strategies could serve to fulfill the need to sell excess water capacity. The task will be to select those alternatives that will best serve the interests of the Town of Landis.

Decisions. A course of action will need to be decided upon if the Town of Landis is to generate increased return on its capital investments. Increasing capital improvements needs on the existing system such as treatment of the backwash water (estimated cost of \$84,000) will provide increased incentive to generate increased revenues for the water system.

Commitments. Once the decisions have been made then commitments through town policy, capital investments and other budgetary demands will have to be made in order that a commitment to a plan of action can be fulfilled.

Phase Three: Community Impact

Once the decisions on alternatives and commitments are made, then continuous analysis of levels of effectiveness must be accomplished and adjustments made to insure continued viability of the town water system as both a service to its residents and a generator of revenue.

WASTEWATER COLLECTION AND DISPOSAL

Phase One: Problem Identification/Definition

The principal problems of the Landis waste water system fall into the two broad categories of collection and treatment. From a capital improvements standpoint treatment poses the most immediate and critical problem.

The Landis wastewater treatment facility, rebuilt in 1966-67, has sufficient average daily flow design capacity (1.25 million gallons per day) to handle the projected 1995 average daily flow of 0.95 million gallons per day. However, the estimated storm-generated peak flow (3.31 million gallons per day, including bypassed flow and overflows) is much greater than the plant's present peak hydraulic capacity (1.75 million gallons per day). Additionally, federal guidelines are requiring the upgrading of the present treatment facility to a tertiary level or a level above the current system by 1984. (Currently the Environmental Protection Agency and the State of North Carolina are urging immediate improvements to the treatment facility.) Resolution of these problems would be greatly improved when and if the Rowan County "201" Sewer Facilities Plan is approved and funded. The principal alternative recommended by the proposed plan would require a capital investment of 2.8 million dollars (1976 dollars). Although this amount is eligible for a 75 percent grant from the U. S. Environmental Protection Agency, this would still leave approximately \$700,000 to be generated locally. This local match is astounding considering that Landis is a community of only around 2,500 people.

The second component of the wastewater system is collection. Like numerous other communities in the piedmont area of North Carolina, Landis is located on a ridge line separating the town into three drainage basins (Grants Creek, Cold Water Creek and Irish Buffalo Creek). The treatment plant is located in the Grants Creek drainage basin thus requiring expensive

pumping and lift stations in the southwest and eastern portions of town. As a result of the expense of pumping across ridge lines, the town is financially limited in its ability to extend its system into the southwest and east.

Need. The needs are to make the necessary improvements to the town waste treatment facility to meet federal and state requirements; improve the collection and treatment system to deal with problems of infiltration/inflow; and produce a mechanism for the orderly and timely extensions of the system to existing urban areas and developing urban areas.

Resources. The resources include the potential availability of federal funds (75 percent); the fact that all municipalities in Rowan County are under equal pressure for improvements and more likely to participate in a joint bonding program; the potential availability of a broad tax base in expanding urban areas; and a basically sound collection and treatment system.

Comparative Analysis. The need to upgrade the collection and treatment system and the available resources to fulfill that need must be brought together to formulate the possible strategies leading to problem solution. Any eventual plan of action must provide for the well being of the citizens of Landis now and in the future.

Phase Two: Problem Solution

Alternative Strategies. The possible strategies which can fulfill the needs at various levels include:

(A) Wastewater treatment

- (1) Upgrade the existing plant on Grants Creek
- (2) Upgrade China Grove plant-interceptor to China Grove plant

- (3) Continue operating existing plant located on Grants Creek, collect the east portion to a point and discharge into a new sewer located on Coldwater Creek.
 - (4) Send wastewater to Salisbury
 - (5) New sewage treatment plant on Grants Creek
 - (6) Collect all wastewater to a point and then transmit to a new sewer located on Irish Buffalo Creek.
 - (7) Do nothing and continue to operate at current levels.
- (B) Improve conditions relative to the amount of infiltration/inflow in the system.
- (1) Design the collection system, flow equalization storage, and/or treatment facilities with sufficient capacities to handle all flows including total infiltration/inflow for the year 1995.
 - (2) Evaluate and rehabilitate the sanitary sewer system on a cost-effective basis. That portion of the infiltration/inflow which could not be cost-effectively eliminated would be conveyed to a flow equalization basin and then to the treatment plant.
- (C) Expansion of the wastewater collection system.
- (1) Extend collection system to projected and existing urban areas with sufficient line size to serve projected types and intensity of development at town expense. Costs would be recouped when, and if, development occurs. This strategy would have to be carefully developed (coordination with water system extensions) in light of the costs of extensions and improvements and the ability to recoup investments through increased revenues from utility rates, tap-ons, and assessment fees and property taxes if annexations occur.

(2) Extending the town system in response to the demands of individual areas at town expense.

(3) Extending the town system in response to the demands of individual areas at developer/property owner's expense and providing a mechanism for the developer to recoup his investment.

(4) Adoption of a comprehensive development policy (see appendix) in coordination with the Land Development Plan providing for the extension of community facilities to developing urban areas and developed urban areas. This policy would be coordinated with the annexation program and proposed subdivision regulations providing minimum standards for community facilities improvements in new urban areas. The policy would also provide the mechanism for the extension of facilities for existing urban areas and prorate the expense for community facilities relative to long term revenue return.

(5) None of the above and continue to operate the system as currently functioning.

Decisions. The following policies or plans of action have been considered or are under study.

(A) Wastewater treatment. The alternatives were examined from an engineering, environmental and economic standpoint in the proposed "201" facilities plan. The plan selected alternative 2 (upgrade China Grove plant-interceptor to China Grove plant) as the most feasible. The "201" plan has tentative approval of the Landis Board of Aldermen.

(B) Improvement of infiltration/inflow. Town engineers identified alternative 2 which is essentially a renovation of the collection system as the preferred alternative. The selection of alternative 2 was based on a cost effective comparison which is based on a twenty year planning period and an annual interest rate of 7 percent. Funding availability for this alternative would be under the "201" facilities plan.

(C) Expansion of the wastewater collection system. The expansion of the collection system is directly associated with the annexation program and the proposed development policy currently under consideration.

Commitments. The Town of Landis has tentatively committed improvements to the wastewater collection and disposal system through the Rowan County "201" facilities plan. This stage of phase two is the current status of the capital improvement need.

Phase Three: Community Impact

Implementation, measure of effectiveness, and adjustments are still some time away on improvements and extension to the wastewater system. This phase must be considered until such time as the improvements are funded and policies and programs are implemented.

STREET MAINTENANCE

Phase One: Problem Identification/Definition

Sufficient funds, including Powell Bill funds, have been established to handle normal maintenance of the municipal street system. The major problem surrounding street maintenance is the provision of a storm drainage system (curb, gutter and storm water).

The storm water system is surface runoff flowing to street curbs, ditches, or swales and then to the nearest branch or creek. In downtown areas and along the state highways, short sections of storm sewer, usually a few hundred feet or less, carry storm water from area drains and curb inlets to the nearest branch. The branches empty into Landis, Coldwater Creek, and Irish Buffalo Creek watersheds.

Need. As a result of heavy rain storms a number of low lying areas, including residential properties, are frequently flooded. The need is perceived as providing a storm water system, including curb and gutter, for the Town of Landis.

Resources. Resources include appropriate equipment for constructing curb and gutter, sufficient rights-of-way for construction, and potential financing methods (including front foot assessments) to perform the necessary work.

Comparative Analysis. The essential task is to fulfill the capital improvement need with available and potential resources to produce a plan of action.

Phase Two: Problem Solution

Alternative Strategies. The following alternative strategies can be identified to fulfill the need at varying levels.

(1) Development of a program for storm water and curb and gutter improvements financed by

- (a) town expense
- (b) front foot assessment schedule
- (c) combination of (a) and (b) with initial emphasis on areas experiencing flooding problems

(2) Installation of curb and gutter at the request of individual property owners financed on the basis of cost of installation to

- (a) the town
- (b) the property owner
- (c) combination of (a) and (b)

(3) Identification and acquisition of drainage easements for improvements and maintenance by the town.

(4) Passage of the proposed subdivision ordinance requiring curb and gutter improvements and dedication of drainage easements

(5) Do nothing and continue system in present condition.

Decisions. The provision of a capital improvements program is currently in this stage of phase two.

Commitments. Once decisions are made relative to the storm water system, commitments will have to be made in the capital investments and development program and affiliated policies and programs of the Town of Landis.

Phase Three: Community Impact

The storm water development program, once committed to, must be implemented on a firm basis. After this is done the program must be constantly evaluated to measure levels of effectiveness and provide such adjustments as necessary for adequate maintenance of the program.

The need is basically to acquire and maintain the necessary vehicles to perform patrol functions. The general procedure for acquiring vehicles has been the purchase of surplus highway patrol vehicles on an "as is" basis.

Inventory. Inventory includes a 1973 Dodge with 100,000 miles (year omitted) and a 1974 Plymouth with 81,000 miles (year omitted) and the availability of additional surplus vehicles from the state.

Comparative analysis. The essential analysis is to determine whether existing resources are fulfilling the need.

Phase Four: Problem Solution

Alternative strategies. To fulfill the need as outlined above the following strategies could be utilized:

(1) The entire fleet or part thereof could be replaced by new vehicles (30,000 to 40,000 miles or newer) surplus state highway patrol vehicles at an estimated cost of between \$10 to \$2,500 (1975

Plymouth) each;

(2) The entire fleet or part thereof could be replaced by new vehicles at an estimated cost of \$5,000 (surplus vehicles) each. This strategy could reduce maintenance costs considerably.

POLICE PROTECTION

Phase One: Problem Identification/Definition

Problems involving police protection in relation to capital improvement needs are primarily focused on the principal piece of equipment--the patrol car. Landis has established a minimum level of acceptable protection. This level of protection requires a minimum of two vehicles for adequate coverage of the community.

Need. The need is basically to acquire and maintain the necessary vehicles to perform patrol functions. The general procedure for acquiring vehicles has been the purchase of surplus highway patrol vehicles on an "as need" basis.

Resources. Resources include a 1973 Dodge with 100,618 miles (fair condition) and a 1974 Plymouth with 81,062 miles (fair condition) and the availability of additional surplus vehicles from the state.

Comparative Analysis. The essential analysis is to determine whether existing resources are fulfilling the need.

Phase Two: Problem Solution

Alternative Strategies. To fulfill the need at different levels the following strategies could be utilized.

(1) The entire fleet or part thereof could be replaced by low mileage (30,000 to 40,000 miles of service) surplus state highway patrol vehicles at an estimated cost of between \$2,200 to \$2,500 (1975 Plymouth) each.

(2) The entire fleet or part thereof could be replaced by new vehicles at an estimated cost of \$5,400 (police package) each. This strategy could reduce maintenance costs considerably.

- (3) Acquisition of a third vehicle (new or surplus) to be placed in service and remove one vehicle to backup status and replace one vehicle on a regular schedule (possibly every two years) thereafter.
- (4) The town could work toward a consortium with other municipalities to acquire vehicles.
- (5) Establishing a policy of using medium or compact size (police package) vehicles for patrol duty.
- (6) Maintain current program of acquiring surplus vehicles on an as need basis.

Decisions. Any policies and/or programs should consider acquisition costs and operation costs in comparison to the fiscal capabilities of the current budget and the long term affects on the capital budget.

Commitments. The turnover of police vehicles, innovations in equipment, increasing costs of operation and other changes in large measure require that commitment to a program of vehicle replacement and acquisition be flexible.

Phase Three: Community Impact

Once commitments to such a program are made and implemented, they must be evaluated as to their levels of effectiveness in the provision of police protection to the citizens of Landis. If effectiveness is not at an acceptable level, it must be adjusted to insure effectiveness.

RECREATION FACILITIES

Phase One: Problem Identification/Definition

Landis has traditionally placed considerable emphasis on the provision of recreation services to its citizens. In cooperation with a private foundation the town is providing a full time, year round recreation program for its citizens. The perceived problem lies in the area of accessible facilities to various parts of the town.

The principal recreation facilities are on the west side of U. S. 29 as a result of the close proximity to the community's schools. The only public recreation facility on the east is the small site on Beaver Street containing the Pavillion and Fireman's Hut.

Need. The need is to provide recreation programs and facilities accessible to all parts of Landis serving various levels of recreational activity.

Resources. Resources include a number of available sites; the potential acquisition and/or development of drainage and open space easements; potential funding by the Bureau of Outdoor Recreation; and tremendous interest of the citizens of Landis.

Phase Two: Problem Solution

Other than the 1975 Community Facilities Plan, there has not been an inventory of potential and existing recreation sites (public and private) for the Town of Landis.

Prior to entry into phase two of the recreation capital improvement needs program, a recreation study including a survey and analysis, projection of existing and future recreation demands, possible alternatives, and recreation program should be prepared. Identification of basic solutions

cannot be accomplished without greater information and citizen input and is therefore outside the realm of this document.

Phase Three: Community Impact

Capital investments in recreational facilities are measurable as to their ability to provide the necessary programs and services that area residents can utilize. In the development of such programs there needs to be considerable attention given to providing the opportunity for recreation to all segments of the population--youth and adult, passive and active.

INTRODUCTION

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APPENDIX

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DEVELOPMENT POLICY

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PROPOSED DEVELOPMENT POLICY

INTRODUCTION

The development and implementation of the capital investments program is a valuable tool in the provisions of services and facilities in fulfillment of the needs and desires of the citizens. A significant factor in the development of new facilities and services are the policies by which the town guides its development.

The physical character of the community is guided by the adopted land use controls based on the Land Development Plan. The investment of public funds is usually guided by a variety of unrelated policies which are normally changed from one situation to another and from one administration to another. Certainly town policies should be flexible to be adaptable to a variety of conditions. They should also be viable enough to provide a strong basis for expensive public investment.

The town of Landis is a public corporation. The citizens of the community are its stockholders and its greatest resource. It is incumbent, therefore, on the Board of Aldermen to assure that every public investment is not only cost effective but also in the best interest of the public.

DEVELOPMENT POLICY

The greatest expenditures to the Town of Landis are the extension of water and sewer services. The proposed subdivision ordinance provides a strong requirement for the provision of improvements to residential property (e.g., paving, curb and gutter, drainage, water and sewer). A policy for extending improvements to all properties is advised to assure that the town's share of any improvements receives the maximum benefits.

Because water and sewer services are such strong determinates of urban growth, the town should use its extensions to shape growth in its area of concern.

ELECTRIC DISTRIBUTION

It is the intent of the Town of Landis to require the extension of the Landis electrical distribution system, as permitted by North Carolina law and the N. C. Utilities Commission, to all properties requesting any or all of the other municipal services.

The policies including rates, fees and other charges applicable to other customers of the Town of Landis' electrical system shall apply to any new customers.

WATER AND SEWER EXTENSIONS

Landis' town policy for the extension of water and sewer services and facilities is herein stated.

Intent

It is the intent of the Town of Landis to establish a policy for the orderly and timely extension of water and sewer services, in accordance to prescribed standards, to properties requiring such services and facilities. The extension of water and sewer services and facilities shall conform to the plans and policies of the Town of Landis.

Extension of the System

As herein set forth, the Town of Landis recognizes its responsibility to provide for a clean and potable water supply and the sanitary disposal of effluent to the residents of the Town of Landis. To fulfill this responsibility the town will extend, wherever feasible, the town water system and sanitary sewer system to all properties within the corporate

limits requiring such services--except where distribution of water or collection and treatment of waste water would be better supplied by on-site facilities due to unusual topographic, geologic, and/or drainage conditions or other factors creating an excessive burden.

Developed Properties - Properties already developed within the corporate limits of the Town of Landis are deemed a part of the town water and sewer system. Connection to the system or the acceptance by the town of on-site facilities is required.

Undeveloped Properties - Undeveloped properties within the corporate limits of Landis requesting acceptance into the system shall petition the Board of Aldermen for the Town of Landis. Said petition shall request service for the property in the name of owner(s) and/or agent(s) for the property. The intended usage of the property and proposed improvements shall comply with officially adopted land use plans, town specifications for improvements, zoning requirements, subdivision regulations, and other relevant town requirements, specifications, and policies. All proposed uses will be evaluated according to the capacity of the town to provide, supply, and distribute waste water collection and treatment prior to acceptance into the system. Non-residential uses requiring unusually high volumes of water or placing unusual demands on waste treatment capacity may be required to cost-share on additional improvements required on the town system and/or develop such on-site facilities that will decrease the burden on the town system.

Extension of System Outside the Corporate Limits

The Town of Landis recognizes the need of supplying urban development with urban services. The most efficient method of supplying urban services is through annexation of urban development into the corporate limits of the

municipality. To the extent feasible, it shall be the policy of the Town of Landis to annex all residential and commercial properties, including properties proposed for such uses, being extended water and sewer services and facilities. Industrial properties will be considered on a case by case basis with annexation preferred.

Prior to the approval of extension of water and sewer services and facilities, the following procedure shall be followed:

- A. Petition for Services. A petition for services shall include the following information:
1. Name(s) of property owner(s) and agent(s).
 2. Name(s) of developer.
 3. Exact location of area under consideration and distance from corporate limits.
 4. Exact size of area under consideration.
 5. Existing and proposed land use, including total number of lots and/or square footage of principal structures, accessory structures, and parking.
 6. Estimated number of dwelling units, type of units, and density per acre.
 7. Estimated number of employees, including projections of future employment.
 8. Highway access.
 9. Projected water usage and treatment requirements.
 10. Plans and specifications for improvements including, but not limited to
 - a. water and sewer line size
 - b. placement of hydrants
 - c. road right-of-way and improvements, including curb, gutter and sidewalks
 - d. location of easements
 - e. exact location of drainage facilities including pipe size and area of concentration
 - f. sedimentation and erosion control
 - g. other plans and specifications as may be required by the subdivision ordinance or other town policies and specifications.

B. Planning Board Review. The petition of services shall be forwarded to the Landis Planning Board for review. The Planning Board shall review the petition in relation to the following:

1. Compliance of proposed land use with town land use plans, zoning ordinance and subdivision regulations.
2. Exact location of nearest water and sewer lines.
3. The need for any lift stations.
4. Water supply, treatment and main capacity.
5. Wastewater treatment and outfall capacity.
6. The relationship of the development to the thoroughfare plan, the school facilities plan, the recreation plan and water and sewer plan for the Town of Landis.
7. Costs/benefits analysis.
8. Environmental impact.
9. Feasibility of annexation.

C. Decision of the Board of Aldermen. The Board of Aldermen, after Planning Board review and recommendations, shall determine whether to extend services and facilities and whether to require annexation of the area under consideration.

Financing

It shall be the policy of the Town of Landis to require cost participation, in whole or in part, in the extension of services and facilities to any property. The degree of participation shall be based on

- a. the degree of benefit on property to which the extension is projected
- b. the degree of benefit to properties that are served as a result of the extension.

An extension which is designed to serve only the property petitioning for the extension shall fully finance that extension. An extension which is designed for the petitioning property and surrounding properties shall be financed through cost-participation by assessment to the petitioning property and other properties served according to the current assessment

policy and schedule of the Town of Landis. The town may require the developer of the petitioning property to finance the entire cost of extension. The town will assess other affected properties according to the assessment schedule in effect at the time of the improvement and reimburse the developer with collected assessments from the effected properties when connection is made to the system. The developer is only eligible for reimbursement from connections made within ten years of the completed improvement.

Properties receiving services and facilities as a result of extension are responsible for making all on-site improvements necessary to serve the intended use. The cost of the on-site improvements shall be totally financed by the developer. The Town of Landis will not approve extensions of services and facilities unless and until the developer of any development under consideration:

1. installs improvements as required by this policy, the proposed subdivision ordinance, and other pertinent town policies and specifications; and these improvements have been inspected and found acceptable; or
2. posts performance, surety, or case bond(s) for improvements as specified in the proposed subdivision ordinance.

Developers of non-residential properties shall provide such facilities and/or agreements for cost sharing as indicated previously in this policy.

CAPITAL IMPROVEMENTS BUDGET

Department	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82	Fund Period Totals
Administrative							
Office equipment & furniture		\$ 1,800			\$ 4,000		\$ 5,800
General statute books	\$ 1,000						1,000
Office expansion		6,000RF					6,000
Department total	1,000	7,800			4,000		12,800
Police Department							
Patrol car		4,800	\$ 4,400		4,400	\$ 4,800	18,400
Radio equipment				\$ 1,000			1,000
Radar equipment		1,000					1,000
Department total		5,800	4,400	1,000	4,400	4,800	20,400
Water & Sewer Department							
Plant expansion & improvements	327,000RF	60,000RF					387,000
Water meter replacement	3,000			3,000			6,000
Waste treatment plant improvements	5,000	20,000RF		20,000RF		20,000RF	65,000
Water tank maintenance		17,000		17,000		17,000	51,000
Paint waste treatment plant	10,000			10,000			20,000
Replace inadequate lines	8,000	8,000	8,000	8,000	8,000	8,000	48,000
Lift station additions & improvements		5,000		5,000		5,000	15,000
Service truck (pickup)		4,000					4,000
Department total	353,000	114,000	8,000	63,000	8,000	50,000	596,000
Street & Sanitation Department							
Curb, gutter & storm drainage			80,000RF	60,000RF	60,000RF	80,000RF	400,000
Street improvements	60,000RF	60,000RF	20,000	20,000	20,000	20,000	120,000
Street sweeper & flusher	20,000	20,000			15,000RF		15,000
Packer truck					40,000RF		40,000
Department total	80,000	80,000	100,000	80,000	135,000	100,000	575,000
Fire Department							
Jackethose 500 feet of 2½" nozzles	1,400		1,000		1,000		3,400
Radio equipment	1,000				2,000	1,000	4,000
Personal equipment (protective gear & breathing apparatus)		1,000		1,000			3,000
Support vehicle							4,000
Department total	2,400	1,000	6,000	1,000	3,000	1,000	14,400
Recreation Department							
Capital facilities		12,000RF	10,000RF	10,000RF	4,000	4,000	40,000
Light Department							
Truck		4,000					4,000
Voltage regulators			5,000				5,000
Transmission & distribution imprvmt.			25,000RF				25,000
Department total		4,000	30,000				34,000
TOTAL CAPITAL EXPENDITURES	\$436,400	\$224,600	\$158,400	\$155,000	\$158,400	\$159,800	\$1,292,600

RF - Capital Reserve Fund

ENVIRONMENTAL ASSESSMENT

Mitigation measures to minimize impact will not be necessary because no recommendations are proposed in this document which will have any adverse consequences. Review of the Landis capital improvements needs raised no environmental problems.

This report does outline a series of scheduled community improvements over a six (6) year period which will be necessary to maintain the existing quality of life. These proposals have been identified in the Landis Community Facilities report. Some of them will possibly have minimum environmental impact if implemented. The following is a list which could possibly have environmental effects.

Administrative services - additions to or new municipal building

Electrical system - expansions/improvements to system

Water delivery - expansion of system

Waste water collection and disposal - improvements to collection and treatment system; expansion of system

Street maintenance - construction of storm water system

Recreation facilities - acquisition and development of recreation facilities

These particular improvements, if made, could have some environmental impact; however, these projects should not be fully evaluated until specific project planning and design occurs.

There is one immediate concern on adverse environmental effects--those improvements which are not implemented could possibly alter the quality of life that now exists in Landis. This would be an adverse environmental effect on human resources. There are no other alternatives at this time

to the considered alternatives in the capital improvements needs. However, if the considered alternatives prove to be unsatisfactory, various other alternatives must be formulated.

The relationship between the short term use of man's environment and maintenance of long term productivity can best be summed up by emphasizing that if alternative strategies are implemented, they will insure that essential services keep up with the rate of development during the planning period. Without such advance planning, the long term adverse environmental impact would result in monetary waste, duplication of services, and a significant loss in the quality of life that now exists.

The development policy establishes procedure for the extension of water and sewer services and facilities. The policy itself is related to capital budgeting and public improvements programming and establishes guidelines and criteria for extension. It will have no irreversible or irretrievable effects on the environment. Mitigation measures will not be necessary.

The Landis zoning ordinance can effectively mitigate many possible environmental concerns. Also, the capital budgeting process alone could be effective in dealing with issues of concern. There will be no irretrievable commitments of resources.

Applicable federal, state and local controls consist of the National Environment Policy Act; General Statutes Chapter 113A, Environmental Policy Act; General Statutes Chapter 160A, Planning enabling legislation; General Statutes Chapter 159, Local Government Budget and Fiscal Control Act; and local health and safety regulations, local zoning and land use controls.

There were no problems of immediate environmental concern raised by the Planning Board, Town Board or general citizenry in reviewing this document.

